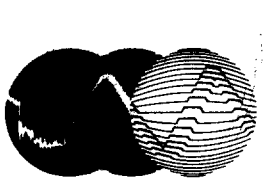

COMSEARCH

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June 15, 1993

Ms. Donna Searcy
Secretary
Federal Communications Commission
1919 M Street, NW
Washington, DC 20554

RE: Request for Acceptance of Late Filing

Dear Ms. Searcy:

This letter is a request for acceptance of a late filing by Comsearch in the Matter of Redevelopment of Spectrum to Encourage Innovation in the Use of New Telecommunications Technologies ET Docket 92-9, RM-7981, RM-8004. As we had made clear to Mr. Rodney Small (OET) last week, Comsearch had every intention of meeting the June 14th deadline. The courier service Messenger Express did not arrive at Comsearch for pick up as scheduled and was unable to make delivery by 5:30 p.m.

Sincerely,

COMSEARCH

Christopher R. Hardy
Manager
Transmission Planning Services

CRH:msw

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Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the matter of

Redevelopment of Spectrum to Encourage Innovation in the Use of New Telecommunications Technologies	)	ET Docket No. 92-9
	)	RM-7981
	)	RM-8004

To: The Commission

COMMENTS OF COMSEARCH

INTRODUCTION

Comsearch hereby respectfully submits these comments in response to Alcatel Network System, Inc's supplemental filing ("FILING") to the Further Notice of Proposed Rule Making ("FNPRM") in the above captioned proceeding.

As a provider of frequency engineering and coordination services for thousands of microwave and satellite users, Comsearch has a keen interest in the outcome of the FNPRM. The FILING proposes a compromise channelization of the bands based upon elements of the FNPRM and subsequent comments made by the TIA and the Joint Commenters.[1] Comsearch supports Alcatel's efforts to expedite the decision making process through it's compromise approach and agrees that the public interest will be ill-served by continued delay.

[1] See, joint comments of Harris Corporation-Farinon Division, Digital Microwave Corporation and Telesciences, Inc (collectively, the "Joint Commenters"), and comments by the Telecommunications Industry Association ("TIA"), ET Docket 92-9, December 11, 1992.

The FILING appears to strike an equitable middle ground in the controversy over appropriate channel bandwidths and plans. Comsearch has been in discussions with both the TIA and Alcatel regarding the merits of various channelizations and frequency plans. Comsearch does not favor one channel bandwidth plan over the other (1.25 vs. 1.6 MHz). It is our contention that either plan can be accommodated through proper engineering practices and the coordination process. However, the determination of the band channel plans, including the number, location and pairings of channels, will have a significant impact on existing and future users of the spectrum. It is imperative that any new plan adopted consider the needs of all users of the band with efficient utilization of the spectrum the principal goal.

Channel Plans

The proposed rechannelization of the five bands included in the FILING must incorporate a flexibility of implementation. Channel pairings can be recommended but should not be required. Limiting the choice of frequencies to "mandatory" pairs can lead to spectrum inefficiency and increased cost to the user. Where pairing of frequencies is difficult or impossible due to interference conflicts, the use of unmatched pairs may be a better solution. For example, it is common for existing wide band systems in the common carrier bands to operate on transmit/receive frequency pairs of opposite polarization. To avoid potential interference, a new

narrow band user limited to mandatory frequency pairs would be required to install additional waveguide and antennas to handle dual-pol operation.

Concatenation of frequencies as proposed in the FILING should not be allowed. The rationale behind Alcatel's need for concatenation, allowing bandwidth growth on the same channel and polarization, is commendable. Yet, if the primary focus of users selecting a channel is to allow for future expansion, then the use of the concatenated channels will become the norm instead of the variant. This will have the disastrous effect of creating numerous channel combinations that will be extremely difficult to engineer and administer. As current policy dictates, users should attempt to identify future channel loading and acquire frequencies with sufficient bandwidth at the outset of operation. For example, at 6 GHz instead of concatenating two 1.25 MHz channels to secure a center frequency on the 2.5 MHz plan, the user should license a 2.5 MHz channel based upon valid growth projections. Currently, Part 21 rules do not have designated channel plans in the 4, 6 and 11 GHz bands and frequency use is governed by industry established frequency plans and the maximum bandwidth limitations of the Rules. The resulting flexibility in channel assignment has been effective and should be allowed to continue even if "official" channel plans are adopted. Specific guidelines should be developed to define "hardship" cases where deviation from the established plans would be allowed. This method of frequency determination allows the

necessary flexibility found in the current Part 21 frequency bands.

While Comsearch generally concurs with the arrangement of the frequency plans in the FILING, the number of proposed new narrow band channels appears to be excessive. Currently channels in the 1.9 GHz band with bandwidth less than 1.6 MHz are accommodated on a total of 24 frequency pairs. The FILING proposes, for bandwidths less than 2.5 MHz, 120 channel pairs in the lower 6 Ghz (5925 - 6425), 213 pairs in the upper 6 GHz (6525 - 6875), 114 pairs at 10 GHz and 56 pairs at 11 GHz. One also must consider that antenna characteristics improve substantially from 1.9 GHz to 6 Ghz providing for increased reuse of frequencies. If the bands are to be subchannelized with hundreds of narrow band channels as proposed in the FILING, specific guidelines must be established prioritizing the channel assignment process. These guidelines should address the assignment of channels in an orderly manner based upon modulation type and bandwidth. For example, narrow band analog channels should be assigned in the upper 6 GHz and 10 GHz bands before the lower 6 GHz and 11 GHz bands. This type of segregation will help reduce the interference complexity of the new environment. Overlapping of different bandwidths and modulation schemes only exacerbates the interference potential and should be avoided whenever possible. Perhaps the availability of new narrow

frequencies until circumstances required the use of alternate channels. If frequencies were unavailable from block "A" the user would license channels from block "B" and so forth. This would afford a manageable approach to the introduction of hundreds of new narrow band channels. Comsearch recommends the Commission look to industry groups such as the NSMA and TIA for guidance in this regard.

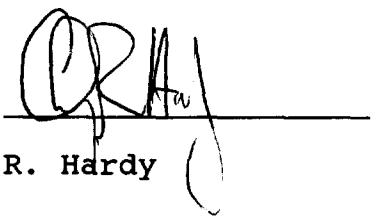
Comsearch agrees with Alcatel's plan to limit channels in the 4 GHz band to 10 and 20 MHz bandwidths. However, Alcatel's proposed change to a high-low plan is not essential and would create numerous interference problems with existing users.[2] As discussed in our previous comments to the FNPRM the introduction of new channel bandwidths could be accomplished using existing industry acknowledged frequency plans.

The channel plans proposed appear to be based upon the presumption

bandwidth requirements rather than service type. This delineation of frequency use based upon technical parameters as opposed to administrative requirements will lead to a much better utilization of spectrum. To implement the assignment of channels successfully under this new regime, prior frequency coordination procedures currently found in CFR 47 Part 21.100 (d) should be employed.[3]

Respectfully Submitted,

COMSEARCH

Prepared by: 

Christopher R. Hardy

Comsearch
11720 Sunrise Valley Drive
Reston, Virginia 22091

[3] The requirement for prior frequency coordination procedures was outlined in the comments of Comsearch to ET Docket 92-9, December 11, 1992, pages 12 - 17.

June 14, 1993

Ms. Donna R. Searcy
Secretary
Federal Communications Commission
1919 M Street, NW
Washington, DC 20554

RE: In the Matter of Redevelopment of Spectrum to Encourage Innovation in the Use of New Telecommunications Technologies
ET Docket 92-9, RM-7981, RM-8004.

Dear Secretary Searcy:

Enclosed herewith is 1 (one) original, and 5 (five) copies of our reply comments to the Alcatel Network Systems, Inc. supplemental filing to the Further Notice of Proposed Rulemaking RM-7981, RM-8004.

Sincerely,

COMSEARCH

Christopher R. Hardy
Manager
Transmission Planning Services

CRH:msw

Enclosure